

Appl. No. 10/017,420
Amdt. dated April 16, 2003
Reply to Office action of January 16, 2003

Remarks/Arguments

Claims 1-6 and 14-20 stand withdrawn by the Examiner as being directed to non-elected species, with claims 7-13 being elected with traverse for prosecution in this application. Applicant confirms this election.

The invention claimed herein is an improved polyester bottle of the type used to package soft drinks. Historically, polyester bottles have exhibited bottle-to-bottle friction during conveying and palletizing. That is, adjacent bottles tend to stick or adhere to each other when moved, e.g., along a conveyor. As a result, the efficiency of manufacture is reduced, and manufacturing cost is increased.

The present invention resides in the discovery that this bottle-to-bottle friction can be reduced by incorporating into the polyester an effective amount of one particular compound: barium sulfate. Polyester bottles including this particular compound, when selected within the specified ranges, not only exhibit reduced bottle-to-bottle friction, they also have an absence of visible haze. Since these bottles are commonly used in packaging of soft drinks and other consumer products, the absence of visible haze is critical to an acceptable commercial product.

As noted in detail in applicant's specification, particularly at pages 2 and 3, various

compounds, including barium sulfate, have been used as additives to polyester film.

However, there has been no suggestion in the prior art of using such additives in polyester bottles within the specified ranges to obtain a bottle characterized by an absence of visible haze and reduced bottle-to-bottle friction. It is applicant's discovery that one of the numerous compounds taught as useable in polyester film is also useful as an additive to polyester bottles, permitting a reduction in bottle-to-bottle friction, while at the same time preserving the essential clarity, i.e., absence of visible haze.

Original claims 7, 8 and 11 stand rejected under 35 U.S.C. 102(e) as anticipated by Peiffer et al. ('663). Original claims 9, 10 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Peiffer et al. ('663) in view of Peiffer et al. ('054). Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Peiffer et al. ('663) in view of Schiavone. These rejections are respectfully traversed and withdrawal is requested for the reasons below.

The Peiffer et al. patents typify the prior art relating to polyester film as detailed at pages 2 and 3 of applicant's specification. Peiffer et al. ('663) specifically describes a polyester film. Contrary to the Examiner's allegation, Col. 3, ll. 13-21, only states that polyester resins are used to produce both film and bottles. The patent does not disclose that the Peiffer et al. film could be used to manufacture bottles, or suggest in any way that commercially acceptable bottles could be manufactured with the listed Peiffer et al. additives.

While Peiffer et al. ('663) discloses that any of a large number of compounds, or

mixtures thereof, can be used as antiblocking agents or pigments in the polyester film such is not the case with bottles. Assuming that certain of the Peiffer et al ('663) statements are accurate, quantities of up to 5% of any of these compounds may be added to polyester film and still achieve a film with low haze. One of the reasons that an analogous result is not achievable with polyester bottles may be that bottles must be substantially thicker than film of the type taught by Pieffer et al. ('663). Note that the Peiffer et al. ('663) film, which is capable of being reeled at high speed, is only from 4 to 50 μm , (0.004 to 0.05 mm) and preferably from 6 to 40 μm (0.006 to 0.04mm) thick. (see Col. 6, ll.18-21). Polyester bottles, on the other hand, typically have a thickness in the range of from about 0.12 to about 0.65mm, and preferably from about 0.2 to about 0.45 mm. (see applicant's specification at p. 7, ll. 11-13.)

As noted at p. 6, ll. 11-20, of applicant's specification, the particle size and amount of barium sulfate that can be added to polyester used for bottles, while still avoiding visible haze, is dependent on the thickness of the bottle. Specifically, it has been discovered that visible haze can only be avoided with thicker bottle walls by using barium sulfate in smaller particle sizes and at smaller percentages.

Thus, while Peiffer et al. ('663) might be able to manufacture a low haze film, due to the thinness of the product with a wide variety of additives, in amount of up to 5% by weight, and with particle sizes greater than 2 microns, such is simply not the case with bottles. One skilled in the art, familiar with polyester film and polyester bottles would not treat them as analogous. In fact, the Peiffer et al. ('663) disclosure instead of

suggesting a solution to the problem solved by applicant, would suggest numerous approaches that would be unworkable.

Instead, with no guidance from Peiffer et al. ('663), one skilled in the art would be required to pick and choose one particular compound from among the numerous compounds taught by Peiffer et al. ('663), picking one other than the preferred SiO₂. The skilled artisan would then need to choose a particle size range other than the preferred range of Peiffer et al. ('663), and then choose an amount not suggested by Peiffer et al. ('663), all to achieve a result that is not taught, suggested or appreciated by Peiffer et al. ('663).

As noted above, Peiffer et al. ('663) does not disclose a polyester bottle comprised of a polyester polymer containing barium sulfate. Therefore, claims 7, 8 and 11 cannot be anticipated under 35 U.S.C. 102. See *Teleflex Inc. v. Ficosa North America Corp.*, 63 USPQ2d 1374 (Fed. Cir.2002): "As we have repeatedly stated, anticipation requires that each limitation of a claim must be found in a single reference. See, e.g., *In re Donohue*, 766 F.2d 531, 534, 226 USPQ 619, 621(Fed. Cir. 1985)."

Moreover, the references alone or in combination fail to suggest that selection of a particular compound and conditions would produce polyester bottles having reduced bottle-to-bottle friction and the absence of visible haze. Thus, none of the claims are obvious within the meaning of 35 U.S.C. 103. As noted in *In re Kotzab* (Fed. Cir.) 55 USPQ2d 1313:

"Although test for establishing implicit teaching, motivation, or suggestion in prior art is what combination of prior art statements would have suggested to those of ordinary skill, such statements must be considered in context of teaching of entire reference, and cannot be viewed in abstract, and rejection of claims cannot be predicated on mere identification in prior art reference of individual components of claimed limitations; rather, particular

findings must be made as to reason skilled artisan, with no knowledge of claimed invention, would have selected these components for combination in manner claimed."

See also *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991):

"Rejection of claimed subject matter as obvious under 35 USC 103 in view of combination of prior art references requires consideration of whether prior art would have suggested to those of ordinary skill in art that they should make claimed composition or device, or carry out claimed process, and whether prior art would also have revealed that such person would have reasonable expectation of success; both suggestion and reasonable expectation of success must be founded in prior art, not in applicant's disclosure."

Claims 7 and 12 also stand rejected as indefinite under 35 U.S.C. 112. Specifically, the Examiner objects to the use of "an effective amount of barium sulfate" in claim 7.

Reconsideration and withdrawal of the objection is requested. The use of the term "an effective amount" is well accepted. As noted in *In re Watson*, 517 F.2d 465, 186 USPQ 11, (CCPA 1975):

"The issue here is whether the phrase "an effective amount" used in independent claim 1 is indefinite under 35 USC 112, second paragraph. 4 Dependent claim 3 was not rejected on this ground. The examiner and the board expressed the view that claim 1 does not recite the effect sought to be produced or the purpose for which the amount is effective, and the examiner cited *In re Frederiksen*, supra, as authority for this ground of rejection. *Frederiksen* is authority for the proposition that the phrase "an effective amount" is indefinite when the claim fails to state the function which is to be achieved. The appealed claim in *Frederiksen* recited "an effective amount of the diethylamino ethanol ester of phenaceturic acid." The claim completely failed to state the effect sought to be produced.

The present case is distinguishable, however, since claim 1 recites "an effective amount of a germicide suitable for use in oral hygiene." The very term "germicide," used in this claim, indicates that germicidal action is the effect sought to be produced. Hence, the recitation points out both the effect sought to be produced and the purpose of that effect, viz, germicidal action in oral hygiene.

Moreover, the claim language must be read in light of the application disclosure as it would be interpreted by one of ordinary skill in the art. See *In re Moore*, 58 CCPA 1042, 439 F.2d 1232, 169 USPQ 236 (1971). Those skilled in the art will be able to determine from the disclosure, including the examples, what an effective amount of germicide is. Cf. *In re Mattison*, 509 F.2d 563, 184 USPQ 484 (CCPA 1975). In the context of the claimed subject matter, the disputed phrase reasonably defines the metes and bounds of the invention to one of ordinary skill in the art. See *In re Halleck*, 57 CCPA 954, 422 F.2d 911, 164 USPQ 647 (1970); and *In re Fuetterer*, 50 CCPA 1453, 319 F.2d 259, 138

USPQ 217 (1963); cf. *In re Caldwell*, 50 CCPA 1464, 319 F.2d 254, 138 USPQ 243 (1963). We hold that claims 1, 2 and 4-6 are not indefinite under § 112, second paragraph."

In the present application, claim 7 explicitly states that the function of the barium sulfate is "as a friction reducing additive."

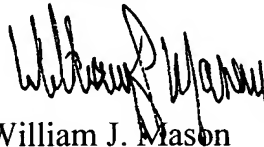
The Examiner also objects to the use in claim 7 of the terms "exhibiting reduced bottle-to-bottle friction" and "being characterized by an absence of visible haze." It is the Examiner's view that one skilled in the art would not be reasonably apprised of the scope of the invention. To the contrary, claims are to be interpreted in view of the specification and with the knowledge of one skilled in the art. Bottle-to-bottle friction is a problem well familiar to one skilled in the art and tests to determine the level of bottle-to-bottle friction are available as shown by applicant's specification. Simply put, one skilled in the polyester bottle art would have no difficulty in determining whether or not bottle-to-bottle friction was reduced. Similarly, one skilled in the polyester bottle art is well familiar with the problem of haze and the need for its absence. Since the test is simply looking at the bottle, certainly one skilled in the art would be able to discern whether or not haze was visibly present. Reconsideration and withdrawal are respectfully requested.

Applicant is submitting a Supplemental Information Disclosure Statement listing two additional patents cited in the search of the corresponding PCT application. Neither of these patents disclose polyester bottles exhibiting reduced bottle-to-bottle friction comprised of a polyester polymer containing an effective amount of barium sulfate as a friction reducing additive, whereby the weight percentage and particle size of barium sulfate are selected to provide a bottle characterized by an absence of visible haze and reduced bottle-to-bottle friction.

New claims have been added to more specifically define the invention, and recite the specific amounts and sizes of the barium sulfate used. These claims are also unanticipated and are unobvious over the cited art and the references from the PCT search.

In view of the foregoing amendments and for the above reasons, it is believed that this application is now in condition for allowance. Such action is respectfully requested. If there are remaining issues that can be resolved by telephone, the Examiner is requested to telephone applicant's attorney at: (910) 256-3557.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'William J. Mason', written over the printed name.

William J. Mason
Registration No. 22,948

Date: April 16, 2003
File No. 5540-002